

Title (en)  
AUTOMATIC CALIBRATION OF A MEASURING CIRCUIT

Title (de)  
AUTOMATISCHE KALIBRIERUNG EINER MESSSCHALTUNG

Title (fr)  
ÉTALONNAGE AUTOMATIQUE D'UN CIRCUIT DE MESURE

Publication  
**EP 3602212 B1 20221207 (EN)**

Application  
**EP 18723045 A 20180320**

Priority  
• FI 20175252 A 20170320  
• FI 2018050205 W 20180320

Abstract (en)  
[origin: WO2018172611A1] The present invention describes an automatic calibration method for a measuring circuit for example in an industrial automation or handling process, where only one person is needed to manage the entire procedure. The components are a calibrator (11) which the worker in the field has with him, which can be connected to the starting end of the measuring circuit in order to give an impulse. The quantity to be measured/calibrated has not been limited. The measurement result is seen at the end of the measuring circuit on a screen of the control room, i.e. DCS (13). Depending on the alternative embodiment, the measured numerical value can be steered either to a dedicated server (14) over an OPC connection, and onwards wirelessly or via Ethernet back to the calibrator (11). One alternative is to use a smart device (16) which the worker has, with suitable applications, to which the measured data can be sent over a network, and the data is also presentable in a user-friendly manner in such an application. Thus, the data can be sent onwards to the calibrator (11) in the field over a BT connection. A third alternative is a direct sending of the measurement result from the control room (13) to the calibrator (11), whereby a 3G/4G/5G network, a Wifi, Bluetooth or Ethernet connection can be used for sending the data. A delay module (15) manages mutual temporal synchronization of the data i.e. numerical pairs. The data can be stored in a spreadsheet, matrix or graphic form in a desired place, such as in the calibrator's (11) own memory or in a desired server for example in a cloud.

IPC 8 full level  
**G05B 19/042** (2006.01)

CPC (source: EP FI US)  
**G01D 18/00** (2013.01 - FI); **G01D 18/008** (2013.01 - US); **G01R 1/28** (2013.01 - FI); **G01R 17/02** (2013.01 - FI); **G01R 35/00** (2013.01 - FI); **G05B 19/0428** (2013.01 - EP); **G05B 23/0267** (2013.01 - FI); **G05B 23/0283** (2013.01 - FI); **G05B 2219/21065** (2013.01 - EP); **G05B 2219/25187** (2013.01 - EP); **G05B 2219/37008** (2013.01 - EP)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2018172611 A1 20180927**; CN 110462532 A 20191115; CN 110462532 B 20221223; EP 3602212 A1 20200205; EP 3602212 B1 20221207; FI 128846 B 20210129; FI 20175252 L 20180921; US 11402244 B2 20220802; US 2020096371 A1 20200326

DOCDB simple family (application)  
**FI 2018050205 W 20180320**; CN 201880019485 A 20180320; EP 18723045 A 20180320; FI 20175252 A 20170320; US 201816496116 A 20180320